

Three New Combinations and a New Name in Chinese Boraginaceae

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ABSTRACT. The new combinations *Lappula karelinii* (Fischer & Meyer) R. Kamelin, *Lindelofia stylosa* (Karelin & Kirilow) Brand subsp. *pterocarpha* (Ruprecht) R. Kamelin, and *Onosma setosa* Ledebour subsp. *transrhymense* (Klokov ex M. Popov) Kamelin are made, and the new name *O. liui* R. Kamelin & T. Popova is proposed.

The revision of the Boraginaceae for the *Flora of China* is in progress, and this study has shown that four nomenclatural adjustments are needed in the genera *Lindelofia*, *Lappula*, and *Onosma*. These changes are proposed here to make the names available for the forthcoming volume 16 of the *Flora*.

Lappula karelinii (Fischer & Meyer) R. Kamelin, comb. nov. Basionym: *Echinosperrum karelinii* Fischer & Meyer, Ind. Sem. Hort. Petrop. 11: 67. 1845. TYPE: [Kazakhstan]. Soongaria. Grown at St. Petersburg Botanical Garden by C. A. Meyer in 1845 from seed collected by G. Karelin (holotype, LE).

Lappula xinjiangensis C. Y. Yang ex C. J. Wang, Bull. Bot. Res. (Harbin) 1(4): 84. 1981, syn. nov. TYPE: China. Xinjiang: Burqin Xian, Ertix He, alt. 400 m, 28 May 1972, C. Y. Yang A-720042 (holotype, XJA).

Lappula karelinii was treated by Popov (1953) as a variant of *L. tenuis* (Ledebour) Gürke, but the latter has a white tuberculate disk and nutlet sides instead of the smooth and polished disk and nutlets characteristic of *L. karelinii*. Wang (1981) described *L. xinjiangensis* C. Y. Yang ex C. J. Wang, but this plant is clearly conspecific with *L. karelinii*.

Lindelofia stylosa (Karelin & Kirilow) Brand subsp. ***pterocarpha*** (Ruprecht) R. Kamelin, comb. et stat. nov. Basionym: *Solenanthus nigricans* Schrenk var. *pterocarpus* Ruprecht, Mém. Acad. Imp. Sci. St. Pétersbourg, sér. 7, 14(4): 62. 1869. TYPE: [Kyrgyzstan]. Tian-Shan, Dshaman-daban Pass, 19 July 1857, *Osten-Sacken s.n.* (holotype, LE).

Subspecies *pterocarpha* was treated by Popov (1953) as a distinct species, although he argued that

it probably deserves only a subordinate rank. It differs from subspecies *stylosa* by its dentate narrow wing on the nutlet margin. In contrast, subspecies *stylosa* has small, anchorlike prickles along the nutlet margin.

Onosma liui R. Kamelin & T. Popova, nom. nov. Replaced name: *Onosma strigosum* Y. L. Liu, Acta Phytotax. Sin. 18: 65. 1980, non *O. strigosum* Steven, Bull. Soc. Nat. Moscou 24: 594. 1851. TYPE: China. Sichuan: Rangtang, alt. 3,400 m, July 1975, *no collector name*, #9355 (holotype, CDBI).

Onosma setosa Ledebour subsp. ***transrhymense*** (Klokov ex M. Popov) Kamelin, comb. et stat. nov. Basionym: *Onosma transrhymense* Klokov ex M. Popov, Spisok Rast. Gerb. Fl. SSSR 12: #3564. 1953. TYPE: [Kazakhstan]. Between Chernojarskoe and Pavlodar, on Irtysch River, 2 June 1890, *P. Schmidt s.n.* (holotype, LE).

This subspecies differs from subspecies *setosa* in having yellow-green hirsute upper parts of the plant and corollas 1.5–1.8(–2) cm long. Subspecies *setosa* has whitish gray hirsute upper parts and corollas 2–2.2(–2.5) cm long. Both subspecies are distributed in Xinjiang Province (China), Russia, and Kazakhstan, but subspecies *transrhymense* extends into Mongolia as well. *Onosma setosa* was treated by Liu (1989) as *O. echioides* L., but the latter is an entirely different species.

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